

Operating Instructions

DIGITAL LINK Terminal Board

English

For business use

- Before connecting, operating or adjusting this product, please read these instructions completely.
- Please keep this manual for future reference.

Mode d'emploi

Plaque à bornes DIGITAL LINK

Français

Pour une utilisation professionnelle

- Avant d'effectuer quelque raccordement que ce soit ou de régler l'appareil, veuillez lire attentivement ce mode d'emploi.
- Conservez ce mode d'emploi pour référence.

取扱説明書

DIGITAL LINK 端子ボード

業務用

保証書付き

日本語

- 取扱説明書をよくお読みのうえ、正しく安全にお使いください。
- 保証書は、「お買い上げ日・販売店名」などの記入を必ず確かめ、取扱説明書とともに大切に保管してください。
- 製造番号は、品質管理上重要なものです。
お買い上げの際は、製品本体の製造番号をお確かめください。

Safety Precautions

(Be sure to observe.)

WARNING

When mounting or removing this product on or from the flat panel display or projector unit, be sure to turn the power off, and remove the power plug from the socket.

- Otherwise, electric shock may occur.

Never attempt to disassemble or modify this product.

- Doing so may cause fire, electric shock or operation errors.

Do not allow the unit to be wet to enter the unit.

- Doing so may cause fire or electric shock.

If you sense smoke, unpleasant odour or unusual noises, immediately disconnect the power plug from the socket.

- Using the product in an abnormal condition may cause fire or electric shock.

For mounting or removing this product on or from the flat panel display or projector unit, ask a qualified technician or sales dealer.

- Installing the product improperly may cause a malfunction or electric shock.

CAUTION

Do not place this product in locations subject to greasy fumes, steams, a lot of moisture or dust.

- The electricity may be conveyed through oil, moisture or dust, resulting in fire.

Do not place the product in locations subject to direct sunlight or extremely high temperature.

- The internal parts may be damaged, or fire may occur.

Precautions for use

This product is a DIGITAL LINK terminal board used by being attached to a Panasonic display and projector.

Do not touch this product directly by hand.

- Static electricity may occur, destroying the components. Static electricity is also generated from clothing or human body. Let the static electricity escape by touching metallic objects such as a steel cabinet beforehand.

Be sure to use the specified connection cable.

- Otherwise, malfunction or operation errors may occur.

Do not touch the terminals or metal parts during use.

- They may be hot for a while during and after use.

When setting up this product at a place, where static electricity occurs often, take a sufficient antistatic measure before start using.

- When this product is used at a location, where static electricity occurs often, such as on a carpet, a wired LAN or DIGITAL LINK communication is disconnected more often. In that case, remove static electricity and the noise source that may cause problems with an antistatic mat, and re-connect the wired LAN or DIGITAL LINK.
- In rare cases, the LAN connection is disabled due to static electricity or noise. In that case, turn off the power of this product and the connected devices once, and then turn on the power again.

This product may not work properly due to strong radio wave from the broadcast station or the radio.

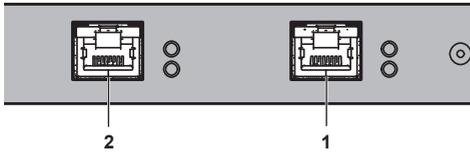
- If there is any facility or equipment, which outputs strong radio wave, near the installation location, set up the product at a location sufficiently far from the source of the radio wave. Or, wrap the LAN cable connected to the DIGITAL LINK input / LAN terminal and DIGITAL LINK output terminal by using a piece of metal foil or a metal pipe grounded at both ends.

The illustrations and figures in this manual are for explanatory purposes and may differ from the actual product.

Trademark Credits

Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.

Terminals



1 DIGITAL LINK input / LAN terminal

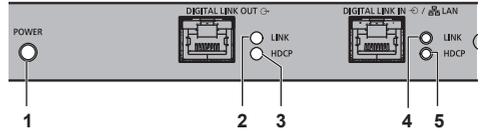
Connect a device that sends image and audio signals via the DIGITAL LINK terminal.

Or connect to a network to control some of the Panasonic displays and projectors. For details, refer to the Operating Instructions of the display and projector.

2 DIGITAL LINK output terminal

When displaying images through multiple daisy chain connections, connect another display and projector.

Identifying Controls



1 POWER indicator

ON: The power is supplied.

Blink: The power is supplied to the DIGITAL LINK input / LAN terminal.

The power is not supplied to the DIGITAL LINK output terminal.

OFF: The power is not supplied.

2, 4 LINK indicator

ON: Sending or receiving DIGITAL LINK signals.

Blink: Not sending or receiving image and audio signals.

Sending or receiving Ethernet signals.

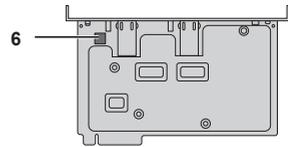
OFF: Not sending or receiving DIGITAL LINK signals.

3, 5 HDCP indicator

ON: Sending or receiving image signals with HDCP.

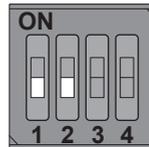
Blink: Sending or receiving image signals without HDCP.

OFF: Not sending or receiving image signals.



6 DIGITAL LINK communication method selector switch

Use switches 1 and 2 to set a communication method of the DIGITAL LINK terminal.



Switch 1	Switch 2	Communication method
OFF	OFF	Auto
ON	ON	DIGITAL LINK
ON	OFF	Long reach

Auto:

Switches the communication method automatically to DIGITAL LINK, Long reach, or Ethernet.

DIGITAL LINK:

Communication method is fixed to DIGITAL LINK.

Long reach:

Communication method is fixed to Long reach.

Modes allowing communication

✓ : Valid

— : Invalid

Settings		Communication validity			
		Picture transmission		Ethernet	RS-232C
		100 m	150 m		
Auto	For DIGITAL LINK	✓	—	✓	✓
	For Long reach	—	✓	✓	✓
	For Ethernet	—	—	✓	—
DIGITAL LINK		✓	—	✓	✓
Long reach		—	✓	✓	✓

Note

- When on-screen menus of the display and projector support the DIGITAL LINK communication method switching, the menu setting is enabled regardless of the selector switch setting.
- Daisy chain connection for LAN control is not supported.
- Models that do not support network connection do not support LAN control.
- When models that support serial connection use daisy chain connection of serial control, set the head and end of the daisy chain connection with the menu. For details, refer to the Operating Instructions of the display and projector.
- Models that do not support serial connection do not support serial control.
- If the communication method of the twisted pair cable transmitter is set to [Long reach], set the selector switch to [Auto]. Then, connection is enabled with the [Long reach] communication method.

When connecting with the separately sold DIGITAL LINK Switcher (ET-YFB200G) with the [Long reach] communication method, set the selector switch to [Long reach].

- Even if the selector switch is set to [Long reach], when the twisted pair cable transmitter does not support the communication method of [Long reach], it will not be connected properly.

Replacing the terminal board

The replacement instruction below is based on the flat panel display as an example.

For attaching or removing this product to or from the flat panel display unit, it is recommended to ask a qualified technician or sales dealer. A malfunction may occur due to static electricity, etc. Consult the sales dealer.

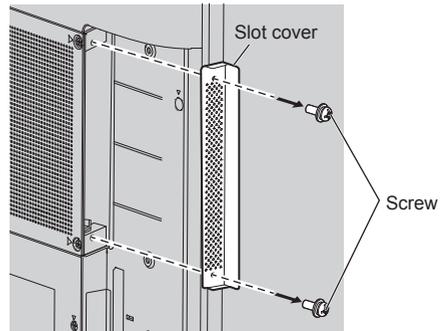
Follow the steps below.

Note

- Be sure to turn off the display unit and connected devices, remove the power plug from the socket, and disconnect the cables from the display.
- When attaching/removing the terminal board, do not allow the metal to damage the back cover or display label.

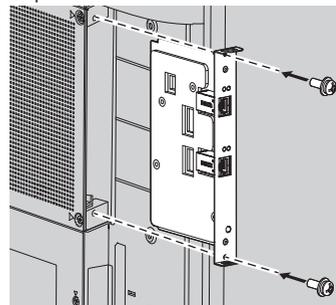
1 Remove the 2 screws, and then remove the slot cover or terminal board from the display unit.

To remove the terminal board, hold the handle of the terminal board and pull it out slowly in the arrow direction.



2 Insert the terminal board to the main unit slot, and tighten the 2 screws.

Fix the terminal board with the 2 screws removed in step 1.



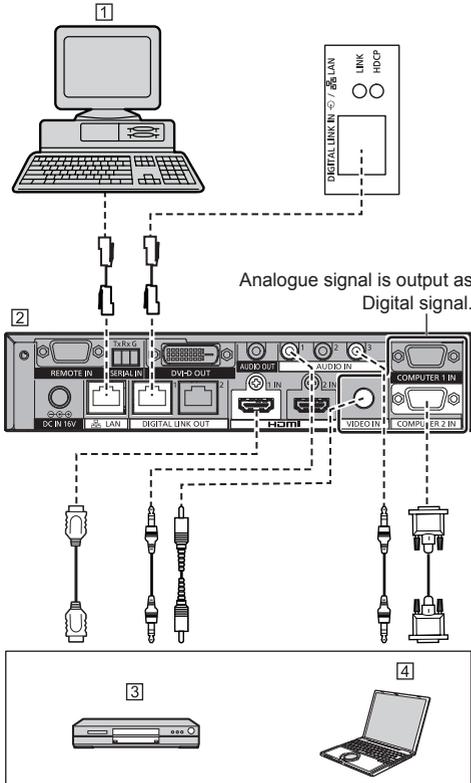
- Tightening torque guideline: 0.5 N·m or less

Note

- When replacing another terminal board with this product, the customer shall keep the replaced terminal board for future repair or servicing.

DIGITAL LINK terminal connection

Twisted pair cable transmitters such as the Panasonic Digital Interface Box (ET-YFB100G) or the DIGITAL LINK Switcher (ET-YFB200G) use twisted pair cables to transmit inputted video and audio signals, and these digital signals can be input to this product via the DIGITAL LINK input / LAN terminal.



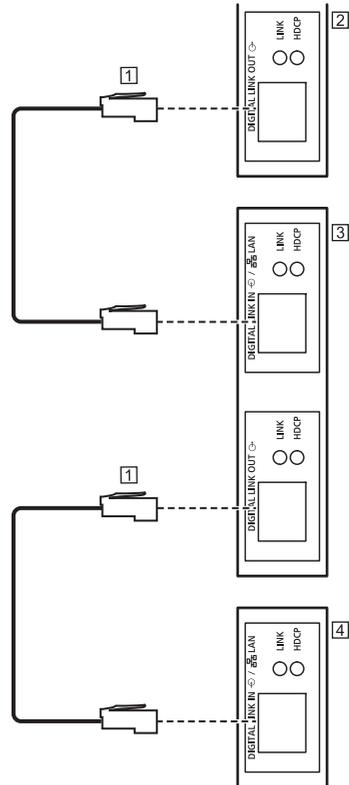
- 1 PC to control the unit
- 2 Example: Panasonic ET-YFB200G
- 3 Blu-ray disc player
- 4 PC

Note

- Video equipment and connection cables are not supplied with this unit.
- Connect some of the Panasonic displays and projectors to a network to control the display and projector. For details, refer to the Operating Instructions of the display and projector.
- Touching the DIGITAL LINK input / LAN terminal with hand (body) charged with static electricity may cause product failure due to discharge of the static electricity. Do not touch the metallic parts of the DIGITAL LINK input / LAN terminal and twist pair cable.

Daisy chain connection

It is possible to daisy chain multiple displays when displaying the picture with multi screen display, etc.



- 1 LAN cable (commercially available)
- 2 First display
- 3 Second display
- 4 Third display

Note

- For daisy chain connection, use a twist pair cable with the same condition as that for the cable used to connect between the transmitter and this unit. Depending on the cable, a transmission error may occur.
- Daisy chain connection is possible up to 10 units, however, the number of connectable units may be restricted depending on the cable, signal, device to be used, etc.
- In daisy chain connection, it may take time for images to appear on all the displays.
- When HDCP1.4 signal is input in daisy chain connection, up to 8 units can be supported.
- When HDCP2.2 signal is input in daisy chain connection, up to 5 units can be supported.
- Even if the DIGITAL LINK OUT terminal of this unit is connected to the twisted pair cable transmitter of other manufacturer, audio and video are not output.

Precautions for use while connecting with a twisted pair cable transmitter

About installation / connection

- Ask a professional or the dealer to carry out the cable wiring work for DIGITAL LINK connections. Insufficient wiring work may cause the inability to apply the cable transmission characteristics and cropped or fuzzy images and sounds.
- The transmission distance between the twisted pair cable transmitter and this product is normally up to 100 meters. When transmitting 4K signal, the maximum is 50 meters. When the transmitter supports [Long reach] communication method, the transmittable distance is up to 150 m. Please note that if exceeding the limit, video or audio may be interrupted, or malfunction may be caused during LAN communication. Furthermore, when connecting using [Long reach] communication method, depending on the specification of the transmitters, transmittable video signals or the distance may be limited.
- Do not use a hub between the twisted pair cable transmitter and this product.
- When connecting this product using the twisted pair cable transmitter (receiver) of other manufacturer, do not use another twisted pair cable transmitter between the twisted pair cable transmitter of other manufacturer and this product. The images and sounds may be interrupted or become unstable.
- If possible, lay the cable extended and not coiled in order to minimize both external and internal noise.
- Lay out cables of the twisted pair cable transmitter and this product away from other cables, especially from the power supply cable.
- When laying multiple cables, keep them together as close as possible running parallelly and not bundled.
- The signal quality cannot be confirmed on a model that does not support DIGITAL LINK signal quality display on the on-screen menu.

After laying cables, ensure that the signal quality is -12 dB or lower on a model that supports DIGITAL LINK signal quality display on the on-screen menu.

About twisted pair cables

- Between the twisted pair cable transmitter and this product, use a LAN cable that conforms to the following conditions.
 - It meets or exceeds CAT5e standards
 - It is a straight cable
 - It is a shielded cable (with a connector)
 - It is a solid cable
- When laying the cable(s), use an instrument such as a cable tester or cable analyser and check whether the cable characteristics are CAT5e or above. When using a relay connector along the path, also include this in the measurements.
- Do not pull cables hard. Also, avoid bending or folding them forcefully.

Others

- This product is compatible with Panasonic devices that support DIGITAL LINK output (ET-YFB100G, ET-YFB200G). For the twisted pair cable transmitter of other manufacturers, see the web site.
(https://panasonic.net/cns/prodisplays/solutions/technology/digital_link/compatible_equipment/)
- Panasonic has tested other manufacturers' devices according to our check items. This will not guarantee all the operations. For operation and performance defects caused by other manufacturers' devices, contact each manufacturer.

Specifications

Model No.	TY-SB01DL
DIGITAL LINK input / LAN terminal DIGITAL LINK IN / LAN	For RJ45 network connection and DIGITAL LINK connection Long reach mode supported, HDCP2.2 supported
DIGITAL LINK output terminal DIGITAL LINK OUT	For RJ45 DIGITAL LINK connection Long reach mode supported, HDCP2.2 supported
Maximum transmission distance	150 m (Long reach mode, resolution of 1080/60p (4:4:4 24 bit) or less) 100 m (Resolution of 1080/60p (4:4:4 36 bit) or less) 50 m (Resolution of 4K/60p (4:2:0) or less)
Supported signal*	Motion picture-related signal resolution: 480/60p, 576/50p to 4 096 x 2 160 Still picture-related signal resolution: 640 x 480 to 3 840 x 2 400 (Non-interlace) Dot clock frequency: 25 MHz to 297 MHz * Image signals that can be displayed by displays and projectors depend on the performance of the displays and projectors.
Dimensions	Width: 195 mm / 7.68" Height: 25 mm / 0.99" Depth: 123.2 mm / 4.85"
Mass	Approx. 280 g / 0.6 lbs net

Customer's Record

The model number and serial number of this product may be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number

Serial Number

Panasonic Connect North America

Unit of Panasonic Corporation of North America

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